HUAWEI

TECH CARES

Our quality of life has a lot to do with the technology around us. Whether it's the humble bicycle or modern wireless connectivity, technology has always been designed around human needs.

Technology is an application of science and knowledge. But with wisdom, it can make positive changes happen at the right place, at the right time. We believe technology can, and should be, used to care for our world in meaningful ways.

Here are 10 examples of how technology can improve lives, support businesses, protect the environment, and even save the planet.

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Forming experts, one at a time

Digital Skills

"The knowledge I developed at the time still helps me today both as a manager and engineer."
— Aziz Gayes, Alumnus of Huawei Seeds for the Future 2016

Investing in information and communication technology is one of the best ways to foster economic development. But throughout the world, the industry's advancement is hampered by a shortage of skilled talent.

In 2016, Aziz Gayes, then a university student in Tunis, enrolled in Huawei Seeds for the Future. The program featured a two-week trip to China where he underwent advanced training at Huawei headquarters in Shenzhen. Today, Gayes is an IT consultant who travels between Paris, Tunis, and Casablanca. Just as important, he says, he made like-minded friends with whom he remains in touch. "We were a group of passionate youths who will always remember the summer of 2016 as the discovery of another world."

Launched in 2008, Huawei's Seeds for the Future has trained nearly 6,000 students from over 125 countries.

Seeds For The Future

Choosing the right chili

Cloud and AI

"People don't simply just eat chili, they taste the struggle, love, and home."
— Gary Gan Kian Keat, Managing Director, Hexa Food

Agricultural goods vary widely in quality depending on where and when they were grown. This poses a challenge for food processing businesses in the premium segment of the market.

Malaysian spice producer Hexa Food developed an AI that accurately sorts good chilies from bad ones. Hexa's IT team built its AI with the help of Huawei Cloud ModelArts. The intuitive technology allows users with no experience in coding to build their own AI system in as little as two weeks.

The technology speeds up production and reduces the rejection rate. "Food quality and safety is really enhanced because of AI," says Gary Gan, Hexa's managing director.

AIE

Helping deaf children to read

Artificial intelligence

"I don't think many parents can imagine not being able to talk or read with their children."
— Mahbub, Father of Tasneem, a deaf child living in the UK

32 million of the world's children are deaf. Because most methods for teaching children to read rely on phonetics, it's a challenge for them to acquire the skill.

In London, a young girl named Tasneem learned to read with the help of StorySign. The phone app scans the words in children's books and translates them into sign language. Young children as well as their parents find the app helpful. "We're learning sign language at the moment but we're not experts," Mahbud, her father, said. "To be able to read to my daughter is the best feeling in the whole world."

Huawei teamed up with the European Union of the Deaf, The British Deaf Association, Penguin Books, Aardman Animations, and others to develop StorySign. The partners are currently working on expanding the number of books that the app can process.

storysign
Powered by Huawei AI

Delivering opera to the masses

Digital Opera

"Art can change people's lives. With technology, we try to make opera and ballet accessible to new audiences in a unique way."
— Gwenola Taithe, Head of Digital of the Opera de Paris

The 350-year-old Paris Opera is a palace of classical art that attracts hundreds of thousands of tourists every year. But in the digital era, it needs to innovate and modernize.

Since 2017, Huawei has supported the Opera's strategy of harnessing technology to make the institution accessible to the largest possible audience. The Paris Opera hopes to bring a classical culture that has been inadequately known to the public, to audiences around the world.

The collaboration led in April 2020 to the launch of *aria*, a web application which uses an interactive design to display Opera clips and share knowledge about art. As of year-end 2020, the application had been viewed over 200,000 times by users in 173 countries.

aria
L'Opéra n'a rien de classique

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Protecting New Zealand's emblem

About 12 million kiwis once inhabited New Zealand. But the population of the flightless bird has dwindled to less than 70,000 due to encroachment on their habitat and their falling prey to non-native predators like dogs. Widely-distributed throughout the country 100 years ago, only 1,500 little spotted kiwis remain alive today.

The NGO Kiwis for Kiwi aims to grow the birds' population back by 2% per year. The group keeps newly-born chicks away from predators and later releases them into habitats where threats are controlled. This may involve training dogs to avoid the birds.

Huawei financially supports Kiwis for Kiwi and has offered its technology to the NGO. "Huawei is well known for its commitment in using technology to help conservationists develop new ways of protecting natural habitats," says Michelle Impey, Executive director of Kiwis for Kiwi. "Kiwis for Kiwi has some big goals, and technology will be key to helping us achieve them."

Kiwis are flightless birds

Kiwis for Kiwi works to protect the birds' natural habitats

Listening to the symphony of love

Humpback whales, the only sea mammals that sing, communicate their mating calls at frequencies that are impossible for the human ear to truly appreciate. Until recently, the public was not able to hear these beautiful symphonies.

Teaming up with World Wildlife Fund Italia, Huawei created a technology that enables smartphones to turn the humpbacks' mating calls into music. The app first records the sound that the mammals make before linking individual calls into harmonic sequences. It then creates and plays melodies inspired by the original whale sound.

"When we were contacted by Huawei and asked to participate in this project, we were immediately impressed," says Donatella Bianchi, President of WWF Italia. "For us, it is important that people know about and fall in love with the species that we study and protect every day."

A humpback whale near the Azores islands, Atlantic Ocean

The app "translates" whales' mating calls using artificial intelligence

Liu Guoqing, forest ranger

Topher White, founder of Rainforest Connection (RFCx)

Using AI to save forests

Virgin forests provide a home to endangered animals such as tigers and pandas, and to plant and insect species still undiscovered by scientists. But these rich ecosystems are threatened by illegal logging and poaching.

Since 2019, Huawei has cooperated with the NGO RFCx to double the accuracy of an AI that automatically detects unusual forest noises — engines or agitated animals, for example — that signal illegal logging. A network of solar-powered mobile phones has been deployed in forests in 14 countries globally. When the AI detects logging sounds, it alerts rangers.

In China, Huawei technology helps rangers patrol the newly-created Northeast Tiger and Leopard National Park. During the first 18 months of the program, Huawei devices connected to sensors automatically snapped and transmitted over 1 million photos. The images have not only helped to keep poachers out but have also supported the work of scientists who monitor the health of the forest.

Fatima Happy, Nurse, Duse Village Dispensary

Students at Duse Primary School

Connecting the unconnected

Around the world, about 700 million people don't have access to a phone or data connection. Being unconnected severely limits access to education, police protection, medical care, and economic opportunities.

RuralStar, a low-cost Huawei network technology, was deployed in Duse, Kenya, in 2017 by local operator Safaricom to provide 2G and 3G coverage. This has turned the lives of the town's 3,000 residents. "Now it is easy to access medicine because I can just make a call," says Fatima Happy, a nurse at Duse Dispensary who used to travel tens of kilometers to seek help from doctors in town. Connectivity has also boosted education. "Teachers can now access the Internet for more information that will assist in teaching and learning," says Mohammed Somo, one of the instructors.

Often powered by just a few solar panels, RuralStar is a cost-effective solution for unserved communities. The technology provides coverage to 40 million people in 50 countries.

Iqaluit, the only city in the Canadian territory of Nunavut, near the Arctic Circle

Jewelry designer Barbara Akoak

Showcasing Arctic art

The vast lands and waters of Canada pose a challenge to telecom operators. Over 5 million Canadians don't have access to high-speed broadband. Coverage is particularly spotty in the far north.

Barbara Akoak is a jeweler based in Iqaluit, a town of 7,500 in the territory of Nunavut. Relying on traditional materials like caribou antlers or ivory from narwhals and walruses, her work is grounded in the local traditions of her Inuit people. But her market is global. "The internet is a major reason I am successful in my visual arts," she says. "My work sells out within minutes as soon as I post."

Huawei has partnered with north Canada operators ICE Wireless and Iristel to provide coverage to hard-to-reach Canadians. By 2025, the three plan to connect 20 communities in the Arctic Circle and 50 communities in Northeastern Quebec.

The joint deployment team of China Mobile and Huawei put up a tent to keep the generator warm and ensure its normal operation

The deployment team installed a radio access network at an altitude of 6,500 meters

Putting 5G on Everest

The brave men and women who face extreme danger and the harshest weather conditions to summit the world's highest mountain deserve outstanding network coverage. Now they have it.

In April 2020, engineers from Huawei and China Mobile switched on in the Himalayas a 5G network providing coverage of Mount Everest, including its 8,850-meter summit. The joint team set up 5G base stations at Everest Base Camp at 5,300 meters, Transition Camp at 5,800 meters, and Forward Camp at 6,500 meters.

"In the past, climbers might lose contact with the outside world for tens of days or even a month," recalls Yuan Fudong, a professional climber who supported the project. Now, they can enjoy high-quality video calls with friends and families following their progress from home. And the world can experience the majesty of Everest in high-resolution in real time.